Delivering energy and value in changing times

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Oil and Money conference, London
29 October 2014

Introduction

Good morning Your Excellencies, Ladies and Gentlemen.

And thank you to Energy Intelligence and the International New York Times for the invitation to be here this morning.

I see we are celebrating 35 years of the Oil and Money conference this year.

I have just recently completed 35 years in the oil industry myself, having joined with great enthusiasm and a sense of adventure in 1979 – which you may be aware was a pretty eventful year for oil and gas.

It was the year of the second Oil Shock, following the Iranian Revolution.

It was the year when the Soviet Union went into Afghanistan.

And for anyone working in the UK North Sea, there was a referendum that year on Scottish independence to think about. So some things don't change!

But the main point is that major change – turbulent, and sometimes dramatic change – has been a constant back cloth in our industry's work.

The oil business has been dealing with uncertainty since it began.

The difference today is simply in the volume, the speed and the diversity of turbulent events that are occurring.

We have conflicts across the Middle East – in Syria, Iraq, Libya and elsewhere in the aftermath of the Arab Spring.

We also have the continuing tensions between Ukraine and Russia and various related sanctions.

Climate change remains a major risk for the planet – yet one that competes for government attention with more immediate concerns over security and the economy.

And economic uncertainty is driving a new wave of volatility in the oil price.

Brent crude is trading at around $85 this week – down from $115 only three months ago and bucking an unprecedented stretch of time at a stable $100.

That is quite a list of unknowns for all of us to manage.

However, I am going to talk about three reasons why we should look ahead with confidence – and not just because we all work in an industry that has a track record for rising to the challenges.

First, new resources. We know demand is going to go up and that there is more than enough energy in the ground to meet it – more than has ever been previously thought.

Second, new technology – which is moving us on in leaps and bounds in terms of what the industry can achieve in finding and producing hydrocarbons safely and economically.

And third, new partnerships – often with old friends – which will allow the industry to deliver the energy the world needs, despite the challenges – both above and below ground.

Then I'll finish with how I see the industry turning these changes into a new proposition for energy consumers and energy investors.

New resources

Let me start with new resources, and the problem that our industry has to solve. First, the population is growing. Anyone over 50 has already seen global population triple and it is set to go from more than 7 billion people today to around 9 billion by 2035.

Second, the global economy is growing – and remember this is the long term view. Global GDP has been increasing, on average by about 3.5% a year since 1970 and that is expected to continue up to 2035.

And third, energy consumption is growing. In the last two decades energy demand grew by about 50% and in the next two decades we expect about 40% growth.

Technically that's a slowdown, but it won't feel like one – because 40% means adding roughly one more US and one more China to the world's energy consumption.

So what do we need to do to meet demand on that scale?

Well we don't need to panic about there being sufficient resources in the ground.

Back in 1980 – at the time of the first Oil and Money conference – the world's proved reserves of oil amounted to about 700 billion barrels.

To date we have consumed 200 billion more barrels than we actually knew were in the ground back then – and found about a trillion more.

As an industry we have proved ourselves highly capable of meeting current demand while at the same time going out and discovering and booking the energy needed to satisfy the phenomenal growth in new demand.

History tells a story of new frontiers and new sources of supply opening up all around the world – gas as well as oil.

Actually, we forecast energy demand being met by equal shares of oil, gas and coal, each delivering 27% by 2035. I think about it as 'the rule of 27's'.

Last year alone we were involved in seven discoveries with commercial potential – in Angola, Brazil, Egypt, India and the Gulf of Mexico. And this quarter we have announced 3 new oil discoveries – Xerelete in Brazil, Guadalupe in the Gulf of Mexico, and Vorlich in the North Sea – to go along with the preparations for the start-up of the new Kinnoull field. That's a great way to celebrate 50 years in the North Sea, as we have been doing this month.

In the next session we will hear a lot about the potential from unconventional resources.

What we know for sure is that unconventionals have turned things full circle in the US.

Last year, shale-related production increases took the US back up to being a 10-million-barrels-a-day oil producer, after dipping below 7 million as recently as 2008.

The US saw the world's largest increase in oil production in 2013 and the prediction is for even stronger production growth this year taking the US back to being the world's largest producer for the first time since 1984.

The US government has estimated that shale gas could increase the world's total gas reserves by as much as 50%.

Looking at the global picture – summarised in BP's annual forward looking forecast, our Energy Outlook – we see over a quarter of the world's gas and more than one in every 10 barrels of oil coming from unconventional supplies by 2035.

That still leaves the lion's share of oil coming from conventional sources – which means more to come from new plays onshore and offshore, from deeper water and deeper wells, and in time, from the Arctic.

New technology

That brings me to my second point, which is new technology.

Given what is happening across the industry, and particularly what I see in BP, I think we may come to look back on this time as a golden age of innovation.

By way of illustration, it's not so long ago that we thought a few hundred feet was deep water. In 1990, 1000 feet was considered deep water. Now we are drilling wells in water depths of 10,000 feet that go down tens of thousands of feet below the seabed.

The next step is to go even deeper, to unprecedented depths, unprecedented pressures and unprecedented temperatures – and of course, safely managing unprecedented levels of risk as we do so.

I am sure we are going to see incredible innovation in the next few years, pushing back the frontiers of science and engineering in terms of the materials we build with, the means we have for remotely monitoring and measuring activity, and our means of ensuring safety.

One example of this is a tool we call the BP Well Adviser. which provides information in a series of screens that you could call 'dashboards for drillers'.

These screens, or consoles, collect data that is picked up by sensors and other equipment during drilling operations. Then they bring it together in real time and in ways that are easy and meaningful to interpret – including simple colour coding to show the health of blow-out preventers and other vital equipment.

So digital technology is developing what's possible at an extraordinary pace – and it is certainly transforming how we image potential reservoirs.

3D and 4D seismic were game changers a decade or so ago.

In BP's case they helped us find fields that were previously hidden under salt canopies such as Atlantis and Thunder Horse in the Gulf of Mexico.

More recently, advanced seismic imaging – enhanced by an ongoing revolution in computing power – has uncovered fields from the Paleogene layer in the Gulf of Mexico, such as the Kaskida and Tiber fields as well as others around the world in Angola, Egypt, Azerbaijan and elsewhere.

The computing capacity is critical here. The word petaflop hasn't made it into the dictionary yet, but the supercomputer we have built in Houston has two of them and they allow it to perform some two billion calculations per second.

In practical terms, that means an analysis that would have taken a geologist 4 years to complete in 2004 can now be done in just a day.

Alongside these innovations in discovery there is another revolution going on in – in recovery – and it's perhaps an even more important one.

The fact is we have probably reached a point globally when the potential for enhanced recovery from known hydrocarbon resources exceeds the potential from new discoveries, including in the Arctic and ultra-deepwater.

The International Energy Association, or IEA, talks about the potential to unlock an extra 300 billion barrels from conventional reservoirs.

Technology is challenging the typical recovery rate of 30 to 35% - which is fast becoming as much a part of history as the theory of peak oil.

Prudhoe Bay in Alaska is still going strong 45 years later and we are now targeting 62% recovery. That is about 5 billion barrels more than originally projected back in the 1970s – or the equivalent of discovering a whole new supergiant field.

And we have just signed a deal to work with ADMA-OPCO in Abu Dhabi to develop an EOR programme that is looking to push the recovery rate beyond 70% from the carbonate reservoirs in offshore Abu Dhabi.

That work will build on our experience with a proprietary EOR technology we call LoSal, which we are going to deploy from Day 1 of production offshore at Clair Ridge in the North Sea in 2017.

By building in EOR from the start we expect to recover an additional 42 million barrels of oil at an additional cost of just $3 a barrel.

New partnerships

Behind these recovery percentages is a reminder that our business is about delivering the best value we can for everyone involved in the partnership – from the consumers at one end to the investors at the other – and the host governments and various oil companies involved in between.

Today's partnerships need to be deeper and richer than they have ever been.

This picture is from the ground-breaking ceremony last month for the Southern Gas Corridor project in Azerbaijan.

Presidents, prime ministers and senior officials from 11 different countries put their signatures on that piece of pipe.

If we go back a century or so, the first chapter in the history of oil industry was all about International Oil Companies.

Then the second chapter was all about the National Oil Companies.

We are now into the next chapter, in which the big stories, as I see it, are all about the NOCs and IOCs and respective governments and authorities working in new kinds of partnerships – each bringing distinctive capabilities and resources into mutually beneficial relationships.

There's a saying I like which is, 'if you want to go fast, go alone; if you want to go far, go together.' And in our industry, stamina is more important than speed.

Given the scale, complexity and cost of some of the biggest projects being undertaken, no one company or country can do them alone. There is a need for strong partnerships to make them happen.

On the same day as signing that pipe in Baku we also celebrated the 20th anniversary of what was called the Contract of the Century – the deal to develop the Azeri-Chirag-Guneshli deepwater oil fields in the Caspian and build the BTC pipeline from Baku to Ceyhan in Turkey – which you see here taking shape back in 2003.

A contract where eleven international companies joined together with SOCAR, the Azeri national oil company, to transform not just the oil industry in Azerbaijan but the country of Azerbaijan – which was facing a recession back in 1994.

Since then GDP has increased sixteen times to $75 billion and the non-oil sector of the economy has developed tenfold – from just under $4 billion to nearly $40 billion last year.

The local business infrastructure has improved out of all recognition and thousands of jobs have been created.

Without doubt, investment has invigorated the oil and gas sector, and the oil and gas sector has invigorated the country.

And Azerbaijan is turning into a major strategic supplier of both oil and gas to the world.

I'd like to mention one more example, one that means a lot to BP.

Back in 2009 we formed the Rumaila Operating Organization with PetroChina and SOMO, Iraq's State Oil Marketing Organisation. It's a partnership that is breathing new life back into one of the world's great oil fields.

It brings together

- PetroChina's access to drilling, manufacturing and engineering resources,
- SOMO's workforce of some 5,000 people eager for work and with experience in the field.
- and BP's experience in operating giant fields.Since 2009 the partnership in Rumaila has
- Drilled around 100 new wells
- Generated business for over 200 Iraqi companies
- Created about 20,000 new jobs in the supply chain
- Raised the skills of thousands of workers, delivering around half-a-million hours of training last year alone.
- And increased production by 40% to 1.4m barrels of oil a day.

Iraq's total daily oil production peaked at 3.5 million barrels in 1979, and 35 years later it looks like it might just be getting close to that figure again.

Elsewhere in the world the prospect of such partnerships is just appearing on the horizon.

In Mexico, for example, a path is being prepared for new types of investment and new types of partnership that are going to offer great new opportunities.

The past 18 months has seen unprecedented changes in Mexico – especially the energy reforms that are in the process of being implemented – the most far-reaching reforms in the industry for many decades.

Without a doubt Mexico has carried out a major transformation of its legal framework to enable a transformation of its energy sector. And that transformation opens up possibilities for a variety of contracts across the entire energy value chain.

We will all be seeing Emilio Lozoya tonight and hearing his comments tomorrow.

Along with President Pena Nieto, Emilio has been instrumental in shaping this new era for energy in one of the world's historic energy-producing nations. It's an era that will bring new technology and new techniques to bear on both new and old resources.

There will be opportunities to show what the latest seismic can discover – both onshore and out into the deep water of the Gulf, including the salt provinces.

There will be opportunities to show what EOR can do to maximise recovery from mature fields.

And the chance to show how new drilling techniques can unlock unconventional resources – such as oil from the tight rocks of Chicontepec, and gas and liquids from Mexico's many promising shale horizons.

The partnerships that unfold may be new – but they will mostly be with old friends.

So we congratulate Mexico and look forward to the new, post-reform era.

New investor proposition

So why should new resources and technology and partnerships matter so much?

They matter to us because they enable our industry to create a better proposition – a safer, more efficient, more cost effective proposition.

It's clear that the industry's offer is under pressure – a pressure that goes up a notch with every dollar that comes off a barrel.

And energy faces tough competition for investment capital from telecoms, pharmaceuticals, IT and other sectors.

This is particularly important for the international oil companies like BP. We have invested a lot of money since the big mergers of the 1990s and continue to do so, given the cost and lifespan of big energy projects.

The IEA estimates an annual spend of $1 trillion across the industry – mostly in the upstream – for the next 20 years.

Meanwhile the analysts are looking at figures that say the majority of projects in the industry have been over budget and have come in late in terms of schedule.

According to EY, two out of every three current projects are facing cost overruns, and three out of four are behind schedule.

That's based on 365 projects of a billion-dollar-plus.

It's not surprising then that the jury is still out in the investment community on the industry's ability to generate sufficient returns.

They want to see strict capital discipline.

They want us to make the right calls and stick to our budgets.

And they want us to execute with great efficiency – and of course with safety as the top priority.

Conclusion

Investors are expecting to see that we all have discipline – an approach that focuses on safe, disciplined and reliable operations, with much attention on generating cash flow as on capital investment.

That is the core of our strategy at BP and for all of us in the industry it provides a stable platform from which to operate securely in an increasingly uncertain landscape.

So we have a strategy. And we have the means to deliver it.

I see an industry increasingly alert to the need for greater financial discipline.

I see an industry focusing more and more on value.

I see the potential of technology. Our own internal view is that future imaging, drilling and digital technologies could reduce today's underlying cost of supply by between 20 and 40%.

Above all, I see new partnerships forming, new resources opening up and I see technology developing at an ever increasing pace.

So I do remain optimistic.

While the disruptions and uncertainties we face today are only likely to get bigger – I have no doubt that our industry has the right approach, the necessary capability and the real desire to keep meeting the challenges.

We have proved we can do it in the past, and we will keep on doing it in the future.

Thank you.